

## REMARKS

Claims 1-20 are pending in the present application. The rejections under 35 U.S.C. 103 are respectfully traversed. However, in order to further the prosecution of this application, independent claims 1, 7, 10, 14, 15, 17 and 20 have been amended in order to further distinguish them from the cited art. Support for the claim amendments can be found in the specification and drawings, in particular in Figure 4 and in paragraphs 0034-0052 of US2004/0165655 (published version of the present application). No new matter has been added. Applicants believe that the present application as amended is now in condition for allowance of which prompt and favorable action is respectfully requested.

### 35 U.S. C. 103 Rejection

Claims 1-20 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sourour (US 6,865,218) in view of the present application's disclosed prior art (specifically figures 2 and 3). The MPEP recited the standard to be applied in an issue of obviousness under 35 USC 103. Section 2143.03 of the MPEP states in part:

### **All Claim Limitations Must Be Considered**

"All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

And, to establish a *prima facie* case of obviousness, the prior art references "must teach or suggest all the claim limitations." M.P.E.P. § 2142.

As amended, independent claims 1, 7, 10, 14, 15, 17 and 20 each recite the claim element of “the second data despreading sequence is different from the first data despreading sequence” or “the data despreading sequence is different for each of the plurality of modulated signals.” Support for this amendment is found in paragraphs 0034 and 0052 which state:

“While the transmitted signals are substantially similar, they are different in that different spreading sequences are used on the data during the modulation process in order to keep the signals from interfering with each other during transmission.” *US2004/0165655, paragraph 0034. Emphasis added.*

“In the above-described embodiment,  $c_{d1}(n)$  and  $c_{d2}(n)$  are different data despreading sequences. Since the base station had to cover the data with different sequences prior to transmission in order to keep the signals from interfering, the fingers of the receiver have to use these different sequences in order to decode the data.” *US2004/0165655, paragraph 0052. Emphasis added.*

In contrast to the recited claim elements, Sourour '218, discloses a multipath interference reduction system which uses the **same** PN offsets (i.e., the **same** data spreading sequences, and hence, the **same** data despreading sequences) with different time delays. In particular, Sourour does not disclose the recited claim elements, that is, using different spreading or despreading (e.g. PN) sequences to avoid interference from multiple transmit antennas used for transmit diversity. Using different data despreading sequences for each signal is one of the features of the pending claims.

“In operation the primary RAKE 202 is configured such that each one of the primary RAKE fingers 210 is assigned to one of the propagation paths of interest. Each primary RAKE finger 210 correlates the received CDMA signal at a time offset corresponding to a path delay associated with the assigned propagation path of that primary RAKE finger 210. Each primary RAKE finger 210 may be time-aligned in a number of ways. For example, the primary RAKE fingers 210 might share delay elements (not shown) such that the received CDMA signal  $r(t)$  could be appropriately delayed or

time offset by values corresponding to the various propagation path delays of interest, and then these time adjusted versions of the received CDMA signal  $r(t)$  could be provided to the corresponding primary RAKE fingers 210. Alternatively, the PN code and Walsh code sequences supplied to each of the primary RAKE fingers 210 and used in their correlation operations can be offset by an amount corresponding to the propagation path delay associated with the particular primary RAKE finger 210. Offsetting the PN code and Walsh code sequences in this manner is often times referred to as 'code phase offsetting.' By offsetting the PN code and Walsh code sequences, it may be more practical to include delay elements within each of the primary RAKE fingers 210." *Sourour (US 6,865,218), Col. 8:50 through Col 9:6. Emphasis added.*

"Thus, the correlator can use the appropriate one in the set of path delay values  $\{\tau\}$  to offset the PN code sequence and Walsh code by an amount related to the path delay of the corresponding propagation path." *Sourour (US 6,865,218), Col. 9:65 through Col. 10:1. Emphasis added.*

The cited secondary reference (i.e., the present application's disclosed prior art) does not make up for this deficiency since it too does not disclose the claim element of using different data despreading sequences to demodulate each modulated signal.

### **CONCLUSION**

In view of the remarks made above that Sourour and the secondary reference do not disclose the claim elements of using different data despreading sequences to demodulate each modulated signal as recited in independent claims 1, 7, 10, 14, 15, 17 and 20 either separately or in combination, a prima facie case of obviousness is not supported.

With respect to the dependent claims, which respectively depend from the independent claims addressed above, these dependent claims are believed to be allowable based on their dependencies, as well as on their merits.

Thus, the cited references, either taken separately or in combination, do not disclose, teach or suggest all of the features of pending claims and the 35 USC 103 rejection should be withdrawn accordingly.

### **Request For Allowance**

In view of the foregoing, Applicants submit that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. The Commissioner is authorized to charge Deposit Account No. 17-0026 for the fees owed for the Request for Continued Examination (RCE). Applicants do not believe that any other fees are due regarding this amendment. However, if any fees are required, please charge Deposit Account No. 17-0026.

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Applicants encourage the Examiner to telephone the Applicants' attorney should any  
issues remain.

Respectfully submitted,

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